

DATE: 11/09/2021

TO: Bryan Hartsook – SER

FROM: Nicole Krueger – SER *Nicole Krueger*

SUBJECT: Technology-Based Effluent Limitations for Johnsonville LLC
WPDES Permit No. WI-0001759-10

PART 1 – BACKGROUND INFORMATION

Johnsonville has three production facilities which produce various types of sausage products:

- Countryside Facility: Produces fresh, non-cooked sausage products
 - 150 – 180 million lbs/year
- Riverside Facility: Produces smoked, cooked sausage products
 - 30 – 50 million lbs/year
- Meadowside Facility: Produces pre-cooked sausage products
 - 100 – 115 million lbs/year

PART 2 – INDUSTRIAL CATEGORIES

Chapter NR 258, Wis. Adm. Code, specifies effluent guidelines for discharges from meat and poultry product categories of point sources and subcategories. All of the production facilities for Johnsonville would fall under the “Sausage and Luncheon Meats Processors” subcategory as defined in s. NR 258.02, Wis. Adm. Code. These guidelines are based on federal effluent guidelines in 40 CFR Part 432 Subpart G. These effluent limit guidelines include:

- Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT) in s. NR 258.10, Wis. Adm. Code.
- Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT) in s. NR 258.11, Wis. Adm. Code.
- If determined to be a new source, new source performance standards (NSPS) in s. NR 258.12, Wis. Adm. Code.

If the calculated limits are less than or equal to the limits in the current permit, then the limits would be set equal to the recalculated limits. If the recalculated limits are less restrictive than the limits from the current permit, they cannot be increased unless the antidegradation and anti-backsliding provisions of ch. NR 207, Wis. Adm. Code, are met.

Section NR 220.13, Wis. Adm. Code, includes provisions that address cases where federal and state rule differ. Section 283.11, Wis. Stats., address compliance with federal standards. In this case, the state rules are consistent with federal rules with a few exceptions. In such cases, the permit will in all cases be based on the state rule notwithstanding the federal regulations. The omissions are described below.

- The state or federal rules do not specify a date for the definition for a new source. Therefore, it is necessary to review available federal guidance. The Boornazian memo (September 28, 2006)

specifies the following new source dates for 40 CFR Part 432 Subparts A – L. The Department relies on the Boornazian memo to establish date of applicability for NSPS.

- Subparts A-D
 - Small facilities: 02/28/1974
 - Others: 09/22/2004
 - Subparts E-I
 - Small facilities: 01/03/1975
 - Others: 09/22/2004
 - Subparts J-L: 09/22/2004
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- State rules incorrectly list best available treatment (BAT) standards for BOD, TSS, pH, fecal coliform, and oil & grease. BAT applies to priority pollutants and nonconventional pollutants and does not apply to BOD, TSS, pH, fecal coliform, or oil & grease.
 - The federal standard rule lists revised BCT standards requirements. All BCT limitations are set to be the same as the best practicable control technology (BPT) standards. State rules in ch. NR 258, Wis. Adm. Code, do not list standards for BCT.

PART 3 – LEVELS OF CONTROL

In addition to the industrial categories, the applicable technology-based limits are determined based on the selected level of control. A facility may fall under best available treatment (BAT), best practicable technology (BPT), and/or new source performance standards (NSPS) based on the date that the facility was constructed.

Production lines which construction commenced prior to 09/22/2004 are not subject to NSPS standards. Therefore, BPT, BCT, and BAT standards for the “Sausage and Luncheon Meats Processors” subcategory are applicable as specified in 40 CFR Part 432 Subpart G and ch. NR 258, Wis. Adm. Code.

PART 4 – CURRENT PRODUCTION LEVELS

The current levels of production for each Subcategory are provided by Johnsonville.

Subcategory	Annual Production for BPT, BCT, and BAT (lbs/year)	Daily Production for BPT, BCT, and BAT (lbs/day)
Sausage and Luncheon Meats Processors	345,000,000	945,205

PART 5 – TBEL CALCULATIONS FOR SAUSAGE AND LUNCHEON MEATS PROCESSORS

pH

Any discharge subject to BPT, BAT, BCT, or NSPS limitations or standards in this part must remain within the pH range of 6.0 to 9.0.

Best Practicable Treatment (BPT)

Johnsonville generates more than 50 million pounds per year of finished products, therefore, the BPT effluent limitations of 40 CFR Part 432.72(b) would apply.

Parameter	BPT Effluent Limitations		Calculated Limits	
	Max Daily (lbs/1000 lbs) ¹	Max Monthly (lbs/1000 lbs) ¹	Max Daily (lbs/day) ²	Max Monthly (lbs/day) ²
BOD ₅	0.56	0.28	529	265
Fecal Coliform (#/100 mL)	400		400	
TSS	0.68	0.34	643	321
Oil & Grease	0.20	0.10	189	94.5

Footnotes:

1. The BPT effluent limitations are from 40 CFR 432.72(b)
2. Calculated limits (lbs/day) = daily production (lbs/day) / 1000 * BPT limitations

Best Available Treatment (BAT)

Johnsonville generates more than 50 million pounds per year of finished products, therefore, the BAT effluent limitations of 40 CFR 432.73(b) would apply.

Parameter	BAT Effluent Limitations	
	Maximum Daily (mg/L)	Maximum Monthly Average (mg/L)
Ammonia (as N)	8.0	4.0
Total Nitrogen	194	134

Best Conventional Pollutant Control (BCT)

Per 40 CFR Part 432.77, the BCT limitations are set to be the same as BPT standards in 40 CFR Part 432.72.

PART 6 – FINAL CALCULATED LIMITS

The total discharge limits shall be the total of the amounts calculated from all subcategories of this memo.

Parameter	Daily Maximum	Daily Minimum	Monthly Average
BOD ₅ , Total	529 lbs/day		265 lbs/day
TSS	643 lbs/day		321 lbs/day
Fecal Coliform	400 #/100 mL		

pH	9.0 su	6.0 su	
Oil & Grease	189 lbs/day		94.5 lbs/day
Ammonia	8.0 mg/L		4.0 mg/L
Total Nitrogen	194 mg/L		134 mg/L

The Department has determined that calculated limits for BOD₅, TSS, and Oil & Grease are greater than the limits calculated in the current permit. Therefore, the limits remain the same as in the current permit. If Johnsonville would like to request an increase to the existing permit limits, an assessment of their effluent data consistent with the requirements of ss. NR 207.04(1)(a) and (c), Wis. Adm. Code, must be provided. This evaluation is on a parameter by parameter basis and includes consideration of operations, maintenance and temporary upsets. Without a demonstration of need for a higher limit in accordance with s. NR 207.04, Wis. Adm. Code, the current limits should be continued in the reissued permit.

The limits for fecal coliform, pH, ammonia, and total nitrogen in this TBEL memo are the same as the current permit, so **no changes are recommended**.

See the WQBEL memo for additional limits.

